



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,993	08/27/2003	David J. Schneider	P755-2/HSCH 200007US01	4365
27885	7590	08/27/2010	EXAMINER	
FAY SHARPE LLP 1228 Euclid Avenue, 5th Floor The Halle Building Cleveland, OH 44115			ANDERSON, JAMES D	
			ART UNIT	PAPER NUMBER
			1614	
			MAIL DATE	DELIVERY MODE
			08/27/2010	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/648,993

**Applicant(s)**

SCHNEIDER, DAVID J.

**Examiner**

JAMES D. ANDERSON

**Art Unit**

1614

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 June 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 43-48, 50 and 52-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 43-48, 50 and 52-59 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-06)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Formal Matters*

Applicants' response and amendments to the claims, filed 6/7/2010, are acknowledged and entered. Claims 43-48, 50, and 52-59 are pending and under examination.

### *Response to Arguments*

Applicants' arguments, filed 6/7/2010, have been fully considered but they are not deemed to be persuasive. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 43-48, 50, and 52-59 remain rejected under 35 U.S.C. 103(a) as being unpatentable over **Arsem** (USP No. 2,472,361; Issued June 7, 1949) and **Marks et al.** (USP No. 2,817,621; Issued Dec. 24, 1957) in view of **Katzen** (USP No. 4,369,199; Issued Jan. 18, 1983) and **Watson et al.** (Biological Control, January 2001, vol. 20, pages 8-15).

### *Claimed Invention*

The instant claims are drawn to treating an animal habitat with trichloromelamine such that the pH is lowered to less than 5. Applicants disclose that such treatment has "indirect insecticide properties" and thus can be used to control Darkling beetles.

Teachings of Arsem

Arsem discloses the claimed trichloromelamine (Table at col. 7) and teaches that highly halogenated substances such as trichloromelamine are useful as **disinfectants and bleaching agents** (col. 7, lines 25-35). The invention of Arsem is directed to methods of making trichloromelamine and thus does not disclose treating animal habitats with the compounds of the invention.

Teachings of Marks et al.

Marks et al. disclose compositions for **germicidal or disinfecting purposes** comprising N-chloro compounds and iodide (col. 1, lines 16-21; col. 2, lines 34-49). Trichloromelamine is a particularly preferred N-chloro compound for use as a germicidal or disinfectant (col. 5, lines 26-27).

Marks discloses that the germicidal and disinfectant compositions are preferably employed at a **pH below 5** by using buffering agents such acid salts or mixtures of acids with neutral or acid salts (col. 5, line 74 to col. 6, line 25). Also see Example I wherein a composition comprising trichloromelamine, arylalkyl sulfonate, citric acid, monosodium dihydrogen phosphate, and potassium iodide is disclosed.

Marks discloses a range of concentration of disinfectant in aqueous solution so as to provide from **50 to 200 ppm** of available chlorine (col. 9, line 70 to col. 10, line 5).

Thus, both Arsem and Marks disclose trichloromelamine as a suitable disinfectant and Marks further discloses the use of compositions comprising trichloromelamine as germicides. Neither Arsem nor Marks discloses treating animal habitats with trichloromelamine.

Teachings of Katzen

Katzen discloses treating animal or poultry waste contained in a dropping pit or sedimentation tank of an animal or poultry confinement or holding pen with a sufficient amount of an aqueous acid to achieve and maintain the animal or poultry waste at a **pH of about 4** (Abstract). Also, Katzen discloses treating animal or poultry bedding with an acid to maintain a pH of about 4 (*id.*). **The treatment eliminates the problems of giving off of unhealthy gases and**

the growth of pathogens in the environment (Abstract; col. 2, lines 28-33; col. 4, lines 39-45).

Thus, by treating an animal habitat with an acidic solution, Katzen teaches that unhealthy gases (e.g., ammonia, methane, carbon dioxide) and growth of pathogens (e.g., Salmonella) in the animal habitat will be reduced.

Teachings of Watson et al.

As evidenced by Watson *et al.*, the darkling beetle is a "common pest" of chicken and turkey houses and "all life stages" are found in poultry litter and manure where they feed on manure, litter, meal, dead birds, and other insects (page 8, right column, second full paragraph).

Findings of Fact (FF)

- I. Trichloromelamine is a known disinfectant, bleach, and germicide (FF I)
- II. Germicidal and disinfectant compositions comprising trichloromelamine are preferably used at a pH below 5 (FF II)
- III. Treatment of animal habitats with aqueous acids was known in the art to be useful for disinfecting said habitats by reducing unhealthy gases and pathogens (FF III)
- IV. Darkling beetles are known pests of chicken and turkey houses and all life stages of Darkling beetles are found in poultry litter and manure (FF IV)

Principles of Law

The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) the level of ordinary skill in the art; (3) the differences between the claimed invention and the prior art; and (4) secondary considerations of nonobviousness, if any. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). The Supreme Court has emphasized that "the [obviousness] analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007).

Analysis & Examiner's Determination of Obviousness

It would have been *prima facie* obvious to one of ordinary skill in the art at the time of Applicant's invention to use trichloromelamine as a disinfectant/germicide for animal habitats.

The prior art recognizes that trichloromelamine is a disinfectant, bleach, and germicide (FF I). Specifically, Arsem and Marks et al. teach that compositions comprising trichloromelamine are useful as disinfectants, bleaches, and germicides. Marks et al. particularly teaches that germicidal and disinfectant compositions comprising trichloromelamine are preferably employed at a pH below 5 by using buffering agents such acid salts or mixtures of acids with neutral or acid salts (FF II).

Treatment of animal habitats with aqueous acids was known in the art to be useful for disinfecting said habitats by reducing unhealthy gases and pathogens (FF III)

Thus, Arsem and Marks et al. teach that trichloromelamine, specifically in acidic solutions, is useful as a disinfectant, bleach, and germicide and Katzen teaches that acids are useful for disinfecting said habitats by reducing unhealthy gases and pathogens. As such, the skilled artisan would have recognized that trichloromelamine could be used as a disinfectant and germicide in animal habitats.

It is well established in the art that animal housings and bedding are in need of disinfecting and thus treatment of such housings and bedding with a disinfectant solution would have been obvious to one skilled in the art at the time the invention was made. Because compositions comprising trichloromelamine were known to have both disinfectant and germicidal properties when used at or below a pH of 5, the skilled artisan would have been motivated to use such compositions for treating an animal habitat, including waste and bedding as disclosed in Katzen.

With regard to claim 47, which recites treatment by dusting the habitat with powdered trichloromelamine, the skilled artisan would expect that dusting a habitat with trichloromelamine would maintain the disinfectant and germicidal properties of trichloromelamine as taught in Arsem and Marks. As such, this method of application of trichloromelamine is not seen as a patentable distinction over the cited prior art.

Response to Arguments

Applicant's arguments filed 6/7/2010 have been fully considered but they are not persuasive.

Firstly, Applicant argues that there is no reasonable expectation of success because the prior art discloses that trichloromelamine is a disinfectant or germicide, whereas the instant claims are drawn to use of trichloromelamine as an insecticide. Applicant argues that none of the cited references teach that trichloromelamine is known to kill insects such as Darkling beetles. In response, the Examiner respectfully submits that the cited prior art teaches, suggests, and motivates the application of trichloromelamine to animal habitats for the purpose of disinfecting said habitats by reducing unhealthy gases and the growth of "pathogens". The cited prior art teaches that the use of trichloromelamine at a pH of below 5. As disclosed by Applicant, reducing the pH of an animal habitat to less than 5 by application of trichloromelamine has "indirect insecticide properties". As such, the control of Darkling beetles, which the prior art teaches are known pests of chicken and turkey houses in which all life stages of Darkling beetles are found in poultry litter and manure, would be a natural result of treating an animal habitat with trichloromelamine as suggested and motivated by the cited prior art.

Secondly, Applicant argues that the link between Marks and Katzen does not refer to trichloromelamine, but rather to the acid. In other words Applicant argues, Katzen teaches adding acid to the animal habitat of Katzen, not trichloromelamine. In response, the Examiner respectfully submits that Marks teaches using trichloromelamine as a disinfectant and germicide at a pH of less than 5, which is acidic. Katzen teaches that acids applied to animal habitats reduce unhealthy gases and pathogens. One skilled in the art would thus expect that application of trichloromelamine at an acidic pH would be effective in reducing unhealthy gases and pathogens as taught in Katzen.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES D. ANDERSON whose telephone number is (571)272-9038. The examiner can normally be reached on MON-FRI 9:00 am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel can be reached on 571-272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

---

*/James D. Anderson/*  
**James D. Anderson, Ph.D.**  
*Primary Patent Examiner, Art Unit 1614*  
UNITED STATES PATENT AND TRADEMARK OFFICE  
400 Dulany Street  
Alexandria, VA 22314-5774  
Tel. No.: (571) 272-9038